

In the Claims

1. (Currently amended) A computer-readable medium comprising a language database structure, comprising:

a descriptor database structure including at least one descriptor, at least one descriptor value for each descriptor wherein each descriptor value is expressed in a language, and a language identifier for each descriptor value wherein the language identifier identifies the language;

a preferred language identifier for identifying a user's preferred language based on information relating to the user, and

a replacement language database structure mapping a single replacement language which serves as substitute to the including at least one replacement language which serves as substitute for the corresponding preferred language when the descriptor does not have the descriptor value in the user's preferred language such that a descriptor value is needed for generating a language-specific output structure.

2. (Previously amended) The computer-readable medium of claim 1, wherein the language identifier is selected from the group consisting of a language name and a language symbol.

3. (Previously amended) The computer-readable medium of claim 1, wherein the language identifier is a language pointer.

4. (Previously amended) The computer-readable medium of claim 1, wherein a first descriptor of the at least one

descriptor has  $N_1$  descriptor values, wherein a second descriptor of the at least one descriptor has  $N_2$  descriptor values, and wherein  $N_{\text{sub}1}$  is unequal to  $N_2$ .

5. (Previously amended) The computer-readable medium of claim 1, wherein the at least one descriptor, the at least one descriptor value for each descriptor, and the language identifier for each descriptor value are stored in a table.

6. (Previously amended) The computer-readable medium of claim 1, wherein the at least one descriptor and the at least one descriptor value for each descriptor are stored in a first table, and wherein the at least one descriptor value for each descriptor and the language identifier for each descriptor value are stored in a second table.

7. (Previously amended) The computer-readable medium of claim 1, wherein the descriptor database structure comprises a table having a name that includes the language identifier, wherein descriptors and associated descriptor values expressed in the language are stored in the table, and wherein the table does not include a descriptor value expressed in another language that differs from the language.

8. (Previously amended) The computer-readable medium of claim 1, further comprising a user database structure including at least one user identifier which identifies a user.

9. (Previously amended) The computer-readable medium of claim 1, wherein the preferred language identifier is selected from the group consisting of a preferred language name and a preferred language symbol.

10. (Previously amended) The computer-readable medium of claim 1, wherein the preferred language identifier is a preferred language pointer.

11. (Previously amended) The computer-readable medium of claim 10, wherein the preferred language pointer points to the preferred language.

12. (Previously amended) The computer-readable medium of claim 10, wherein the preferred language pointer points to an algorithm automatically determines the preferred language based on stored information about a user and further wherein said stored information about a user and further said stored information does not include the user's preferred language.

13. (Withdrawn) The language database structure of claim 8, further comprising a replacement language database structure, wherein the replacement language database structure expresses a replacement language as a function of the preferred language.

14. (Previously amended) The computer-readable medium of

claim 1, further comprising an application database structure which includes:

at least one output descriptor, wherein each output descriptor appears as a descriptor within the descriptor database structure; and

an output zone of an output medium associated with each output descriptor.

15. (Previously amended) The computer-readable medium of claim 14, wherein the output medium includes a screen display, and wherein each output zone identifies a portion of the screen display.

16. (Previously amended) The computer-readable medium of claim 15, wherein each output descriptor is of an output type selected from the group consisting of a screen title, a prompt, a help text, an error message, an instruction message, and an informational message.

17. (Previously amended) The computer-readable medium of claim 14, wherein the output medium includes a printed page, and wherein each output zone identifies a portion of the printed page.

18. (Currently amended) A computer-implemented method of generating a language-specific output structure on an output medium, comprising the steps of:

providing a descriptor database structure including at least one descriptor, at least one descriptor value for each descriptor wherein each descriptor value is expressed in a language, and a language identifier for each descriptor value wherein the language identifier identifies the language;

providing a replacement language database structure, wherein said replacement language database structure includes ~~at least~~ one a single replacement language which serves as replacement for a corresponding preferred language;

determining a user identifier of a user;

identifying a preferred language based on the user identifier;

determining at least one output descriptor and associating with each output descriptor an output zone of the output medium, wherein each output descriptor appears as a descriptor within the descriptor database structure;

generating a descriptor value for each output descriptor, by utilizing the preferred language and the descriptor database structure if a descriptor value for a preferred language exists, otherwise generating a descriptor value by utilizing said replacement language for an output descriptor where no descriptor value exists for the preferred language with the replacement language being a predefined function of the preferred language; and

transferring the descriptor value for each output descriptor to the associated output zone of the output medium.

19. (original) The method of claim 18, wherein the language identifier is selected from the group consisting of a language name and a language symbol.

20. (original) The method of claim 18, wherein the language identifier is a language pointer.

21. (original) The method of claim 18, wherein a first descriptor of the at least one descriptor has N.sub.1 descriptor values, wherein a second descriptor of the at least one descriptor has N.sub.2 descriptor values, and wherein N.sub.1 is unequal to N.sub.2.

22. (original) The method of claim 18, wherein the step of providing a descriptor database structure comprises providing a table which includes the at least one descriptor, the at least one descriptor value for each descriptor, and the language identifier for each descriptor value.

23. (original) The method of claim 18, wherein the step of providing a descriptor database structure comprises: providing a first table which includes the at least one descriptor and the at least one descriptor value for each descriptor; and providing a second table which includes the at least one descriptor value for each descriptor and the language identifier for each descriptor value.

24. (original) The method of claim 18, wherein the step of providing a descriptor database structure comprises providing a table having a name that includes the language identifier, wherein the table includes the descriptors and the associated descriptor values which are expressed in the language, and wherein the table does not include a descriptor value expressed in another language that differs from the language.

25. (original) The method of claim 18, wherein the step of determining a user identifier includes prompting the user for information from which the user identifier may be ascertained.

26. (original) The method of claim 18, wherein the step of identifying a preferred language comprises identifying a preferred language identifier from a user database structure, said preferred language identifier being used to identify the preferred language, and said user database structure including: a list of user identifiers, said list including the user identifier of the user; and a preferred language identifier associated with each user identifier.

27. (original) The method of claim 26, wherein the preferred language identifier is selected from the group consisting of a preferred language name and a preferred language symbol.

28. (original) The method of claim 26, wherein the preferred language identifier includes a preferred language pointer.

29. (original) The method of claim 28, wherein the preferred language pointer points to the preferred language.

30. (previously presented) The method of claim 28, wherein the preferred language pointer points to an algorithm automatically determines the preferred language based on stored information about a user and further wherein said stored information does not include the user's preferred language.

31. (withdrawn) The method of claim 26, further comprising providing a replacement language database structure, said replacement language database structure expressing a replacement language as a function of the preferred language.

32. (original) The method of claim 18, wherein the step of determining at least one output descriptor and associating with each output descriptor an output zone of the output medium comprises providing an application database structure which includes: the at least one output descriptor, wherein each output descriptor appears as a descriptor within the descriptor database structure; and the output zone of the output medium associated with each output descriptor.

33. (original) The method of claim 18, wherein the output medium includes a screen display, and wherein each output zone identifies a portion of the screen display.

34. (original) The method of claim 33, wherein each output descriptor is of an output type selected from the group consisting of a screen title, a prompt, a help text, an error message, an instructional message, and an information message.

35. (original) The method of claim 18, wherein the output medium includes a printed page, and wherein each output zone identifies a portion of the printed page.

36. (Currently amended) A computer-readable medium comprising a language-specific output structure, comprising an output medium and descriptor values on the output medium, wherein the descriptor values are placed on the output medium by a process comprising the steps of:

providing a descriptor database structure including at least one descriptor, at least one descriptor value for each descriptor wherein each descriptor value is expressed in a language, and a language identifier for each descriptor value wherein the language identifier identifies the language;

providing a replacement language database structure, wherein said replacement language database structure includes ~~at least one a single~~ replacement language which serves as replacement for a corresponding preferred language;

determining a user identifier of a user;  
identifying a preferred language based on the user identifier;

determining at least one output descriptor and associating with each output descriptor an output zone of the output medium, wherein each output descriptor appears as a descriptor within the descriptor database structure;

generating a descriptor value for each output descriptor, by utilizing the preferred language and the descriptor database structure if a descriptor value for a preferred language exists and further wherein generating a descriptor value by utilizing said replacement language for an output descriptor where no descriptor value exists for the preferred language with the replacement language being a predefined function of the preferred language; and

transferring the descriptor value for each output descriptor to the associated output zone of the output medium.

37. (Previously amended) The computer-readable medium of claim 36, wherein the language identifier is selected from the group consisting of a language name and a language symbol.

38. (Previously amended) The computer-readable medium of claim 36, wherein the language identifier is a language pointer.

39. (Previously amended) The computer-readable medium of claim 36, wherein a first descriptor of the at least one descriptor has N.sub.1 descriptor values, wherein a second descriptor of the at least one descriptor has N.sub.2 descriptor values, and wherein N.sub.1 is unequal to N.sub.2.

40. (Previously amended) The computer-readable medium of claim 36, wherein providing a descriptor database structure comprises providing a table which includes the at least one descriptor, the at least one descriptor value for each descriptor, and the language identifier for each descriptor value.

41. (Previously amended) The computer-readable medium of claim 36, wherein providing a descriptor database structure comprises: providing a first table which includes the at least one descriptor and the at least one descriptor value for each descriptor; and providing a second table which includes the at least one descriptor value for each descriptor and the language identifier for each descriptor value.

42. (Previously amended) The computer-readable medium of claim 36, wherein providing a descriptor database structure comprises providing a table having a name that includes the language identifier, wherein the table includes the descriptors and the associated descriptor values which are expressed in the language, and wherein the table does not include a descriptor value expressed in another language that differs from the language.

43. (Previously amended) The computer-readable medium of claim 36, wherein determining a user identifier includes

prompting the user for information from which the user identifier may be ascertained.

44. (Previously amended) The computer-readable medium of claim 36, wherein identifying a preferred language comprises identifying a preferred language identifier from a user database structure, said preferred language identifier being used to identify the preferred language, and said user database structure including: a list of user identifiers, said list including the user identifier of the user; and a preferred language identifier associated with each user identifier.

45. (Previously amended) The computer-readable medium of claim 44, wherein the preferred language identifier is selected from the group consisting of a preferred language name and a preferred language symbol.

46. (Previously amended) The computer-readable medium of claim 44, wherein the preferred language identifier includes a preferred language pointer.

47. (Previously amended) The computer-readable medium of claim 46, wherein the preferred language pointer points to the preferred language.

48. (Previously presented) The computer-readable medium of claim 46, wherein the preferred language pointer points to an

algorithm which automatically determines the preferred language based on stored information about a user and further wherein said stored information about a user and further wherein said stored information does not include the user's preferred language.

49. (Withdrawn) The computer-readable medium of claim 44, wherein the process further comprises providing a replacement language database structure, said replacement language database structure expressing a replacement language as a function of the preferred language.

50. (Previously amended) The computer-readable medium of claim 36, wherein determining at least one output descriptor and associating with each output descriptor an output zone of the output medium comprises providing an application database structure which includes: the at least one output descriptor, wherein each output descriptor appears as a descriptor within the descriptor database structure; and the output zone of the output medium associated with each output descriptor.

51. (Previously amended) The computer-readable medium of claim 36, wherein the output medium includes a screen display, and wherein each output zone identifies a portion of the screen display.

52. (Previously amended) The computer-readable medium of claim 51, wherein each output descriptor is of an output type

selected from the group consisting of a screen title, a prompt, a help text, an error message, an instructional message, and an information message.

53. (Previously amended) The computer-readable medium of claim 36, wherein the output medium includes a printed page, and wherein each output zone identifies a portion of the printed page.

54. (Currently amended) A computer system for generating a language-specific output structure on an output medium, comprising: a processor; a memory device; an input device coupled to the processor; an output device coupled to the processor; a language database structure coupled to the processor; and a computer code located on the memory device,

wherein the output device includes the output medium,  
wherein the processor executes the computer code,  
wherein the language database structure includes a descriptor database structure and a replacement language database structure and a replacement language database structure,

wherein the descriptor database structure includes at least one descriptor, at least one descriptor value for each descriptor such that each descriptor value is expressed in a language, and a language identifier for each descriptor value such that the language identifier identifies the language,

wherein said replacement language database structure includes ~~at least one~~ a single replacement language which serves

as substitute for the corresponding preferred language when the descriptor does not have the descriptor value in the user's preferred language such that a descriptor value is needed for generating a language-specific output structure;

and wherein the computer code comprises an algorithm which includes: determining a user identifier of a user; identifying a preferred language based on the user identifier; determining at least one output descriptor and associating with each output descriptor an output zone of the output medium, wherein each output descriptor appears as a descriptor within the descriptor database structure; generating a descriptor value for each output descriptor, by utilizing the preferred language and the descriptor database structure; and transferring the descriptor value for each output descriptor to the associated output zone of the output medium.

55. (Original) The computer system of claim 54, wherein the language identifier is selected from the group consisting of a language name and a language symbol.

56. (Original) The computer system of claim 54, wherein the language identifier is a language pointer.

57. (Original) The computer system of claim 54, wherein a first descriptor of the at least one descriptor has N.sub.1 descriptor values, wherein a secnd descriptor of the at least one descriptor has N.sub.2 descriptor values, and wherein N.sub.1

is unequal to N.sub.2.

58. (Original) The computer system of claim 54, wherein the at least one descriptor, the at least one descriptor value for each descriptor, and the language identifier for each descriptor value are stored in a table.

59. (Original) The computer system of claim 54, wherein the at least one descriptor and the at least one descriptor value for each descriptor are stored in a first table, and wherein the at least one descriptor value for each descriptor and the language identifier for each descriptor value are stored in a second table.

60. (Original) The computer system of claim 54, wherein the descriptor database structure comprises a table having a name that includes the language identifier, wherein descriptors and associated descriptor values expressed in the language are stored in the table, and wherein the table does not include a descriptor value expressed in another language that differs from the language.

61. (Original) The computer system of claim 54, wherein determining a user identifier includes prompting the user for information from which the user identifier may be ascertained.

62. (Original) The computer system of claim 54, wherein the

language database structure further includes a user database structure, wherein identifying a preferred language comprises identifying a preferred language identifier from the user database structure, said preferred language identifier being used to identify the preferred language, and said user database structure including: a list of user identifiers, said list including the user identifier of the user; and a preferred language identifier associated with each user identifier.

63. (Original) The computer system of claim 62, wherein the preferred language identifier is selected from the group consisting of a preferred language name and a preferred language symbol.

64. (Original) The computer system of claim 62, wherein the preferred language identifier in the user database structure includes a preferred language pointer.

65. (Original) The computer system of claim 64, wherein the preferred language pointer points to the preferred language.

66. (Original) The computer system of claim 64, wherein the preferred language pointer points to an algorithm which executes program steps that determines the preferred language.

67. (Original) The computer system of claim 62, wherein the language database structure further includes a replacement

language database structure, said replacement language database structure expressing a replacement language as a function of the preferred language.

68. (Original) The computer system of claim 54, wherein the language database structure further includes an application database structure, wherein determining at least one output descriptor and associating with each output descriptor an output zone of the output medium comprises accessing the application database structure, and wherein the application database structure includes: the at least one output descriptor, wherein each output descriptor appears as a descriptor within the descriptor database structure; and the output zone of the output medium associated with each output descriptor.

69. (Original) The computer system of claim 54, wherein the output medium includes a screen display, and wherein each output zone identifies a portion of the screen display.

70. (Original) The computer system of claim 69, wherein each output descriptor is of an output type selected from the group consisting of a screen title, a prompt, a help text, an error message, an instructional message, and an information message.

71. (Original) The computer system of claim 54, wherein the output medium includes a printed page, and wherein each output zone identifies a portion of the printed page.

72. (Currently amended) A computer program product,  
comprising:

a computer usable medium having a computer readable program  
code embodied therein for generating a language-specific output  
structure on an output medium,

wherein the computer readable program code comprises an  
algorithm which utilizes a language database structure,

wherein the language database structure includes a  
descriptor database structure, and a replacement language  
database structure and a replacement language database structure,

wherein the descriptor database structure includes at least  
one descriptor, at least one descriptor value for each descriptor  
such that each descriptor value is expressed in a language, and a  
language identifier for each descriptor value such that the  
language identifier identifies the language,

wherein said replacement language database structure  
includes ~~at least one~~ a single replacement language which serves  
as substitute for the corresponding preferred language when the  
descriptor does not have the descriptor value in the user's  
preferred language such that a descriptor value is needed for  
generating a language-specific output structure; and

wherein the algorithm includes:

determining a user identifier of a user;  
identifying a preferred language based on the user  
identifier;

determining at least one output descriptor and associating with each output descriptor an output zone of the output medium, wherein each output descriptor appears as a descriptor within the descriptor database structure;

generating a descriptor value for each output descriptor, by utilizing the preferred language and the descriptor database structure if a descriptor value for a preferred language exists, otherwise generating a descriptor value by utilizing said replacement language for an output descriptor where no descriptor value exists for the preferred language; and

transferring the descriptor value for each output descriptor to the associated output zone of the output medium.

73. (Original) The computer program product of claim 72, wherein the language database structure further includes a user database structure, wherein identifying a preferred language comprises identifying a preferred language identifier from the user database structure, said preferred language identifier being used to identify the preferred language, and said user database structure including: a list of user identifiers, said list including the user identifier of the user; and a preferred language identifier associated with each user identifier.

74. (Original) The computer program product of claim 72, wherein the language database structure further includes an application database structure, wherein determining at least one

output descriptor and associating with each output descriptor an output zone of the output medium comprises accessing the application database structure, and wherein the application database structure includes: the at least one output descriptor, wherein each output descriptor appears as a descriptor within the descriptor database structure; and the output zone of the output medium associated with each output descriptor.